

is offered, and because they allow ILECs to meet competition from cable modem services and data CLECs. In this connection, the only remotely plausible arguments that unbundling imposes costs in an NGDLC architecture are based on the costs of competitive collocation and unbundling of line cards in remote terminals – which are costs that would be eliminated if the Commission corrects the definitional and other errors that have prevented CLECs from accessing “unified” NGDLC loops in central offices. As to FTTH, the assertions and studies are the sheerest contrivances. FTTH, although of potentially significant value, is not being offered today because the costs to deploy it are enormous and the consumer demand and willingness to pay for its enhanced capabilities do not now exist. And the “studies” that purport to show that unbundling prevents deployment of FTTH are fabrications that rest on numerous palpably false (and unsupported) assumptions. *See generally* Clarke-Donovan Reply Dec.

**The Intermodal Competition Provided By Cable Operators, Wireless Carriers, And Others Provides No Basis To Alter the Unbundling Obligations.** *USTA* also held that the Commission’s *Line Sharing Order* had improperly failed to consider claims that the “intermodal” competition provided by cable operators, satellites, and wireless carriers is sufficient to satisfy the objectives of the Act and that such competition eliminates any reason to adopt or to maintain that unbundling obligation. The incumbents’ comments have thus sought to avoid unbundling obligations by relying on the “competition” provided by wireless carriers and cable operators. Neither has any pertinence to this proceeding.

The claims based on wireless carriers are absurd, for wireless service is simply not a remotely adequate substitute for wireline local telephone service. For example, while wireline service is engineered to produce call completion rates in excess of 99.9%, wireless systems fail to complete (or drop) 30% or more of calls, and the most that incumbents can claim is that a

small fraction of customers regard wireless service as an adequate substitute for *second* telephone lines.

As to cable television systems, some offer voice “cable telephony services” and most offer internet access services that are reasonable (but not perfect) substitutes for the internet access services that can be provided over the high frequency portion of local loops. But neither provides any basis for eliminating the incumbents’ unbundling obligations. Cable telephony is extremely limited in scope. Indeed, CLECs in New York have gained about as many customers using UNE-P as have all cable companies nationwide. Willig Dec. ¶ 86. Further, even if cable telephony competition were to develop, it would permit, at most, a duopoly, which, as the Commission has correctly held, is insufficient to create competition from multiple firms, which is the object of the Act. *See UNE Remand Order* ¶ 55. Although cable modem services are relatively mature, the same is true for them. Indeed, the Commission need look no further than the price increases that incumbents initiated in response to the contraction of data CLECs last year – and the incumbents’ current efforts to engage in price signaling and other forms of tacit collusion – to demonstrate that the level of intermodal competition is insufficient to achieve the Act’s goals.

In sum, the Commission should (1) maintain its existing national list of UNEs; (2) eliminate the “interim” use and commingling restrictions and authorize unrestricted access to existing and new loop/transport combinations; (3) correct the definitional and other errors that prevent CLECs from accessing NGDLC loops in central offices; (4) modify the switching “carve out” so it applies only to customer locations served by DS-1 and higher capacity loops; and (5) provide that unbundled switching must remain available for voice grade loops in an office unless

and until electronic loop provisioning is implemented and a competitive market for local switching has developed. The bases for these proposals are set forth in detail below.

## ARGUMENT

### I. THE FACTORS ON WHICH AT&T RELIES ESTABLISH "IMPAIRMENT" UNDER *VERIZON* AND *USTA* FOR EACH RELEVANT PRODUCT AND GEOGRAPHIC MARKET.

Because the particular network elements at issue here are not proprietary (AT&T at 34 n.2), the central question before the Commission is whether denying CLECs access to each element would "impair the[ir] ability" to provide "the services" that they "seek[] to offer." 47 U.S.C. § 251(d)(2). AT&T's initial comments (at 34-40) explained that the Commission's *UNE Remand Order* established a multi-factor standard for determining "impairment" and that there was no basis to depart from this standard.

The Supreme Court's *Verizon* decision established the general validity of this standard, for it held that the Act makes local competition "an end in itself" and gives "hundreds" of small entrants the ability to use "costly to duplicate" facilities even if there were "large competitive carriers" that had the "resources" to replicate them. *Verizon*, 122 S. Ct. at 1654 & 1672. n.27. However, in the recent *USTA* decision, the Court of Appeals held (in reliance on *Verizon*) that one aspect of one of the five factors in the *UNE Remand Order*'s impairment analysis was impermissibly overbroad. In particular, the Court of Appeals remanded that order because it found that the Commission's standard for identifying the cost disadvantages that can constitute impairment had improperly allowed the Commission to rely on "cost disparities" that are "universal between new entrants and incumbents in any industry." *USTA*, 290 F.3d at 426-28.<sup>6</sup>

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<sup>6</sup> The Court also remanded the separate *Line Sharing Order* on the ground that it had been error for the Commission to refuse to consider the intermodal substitutes for services that can be offered through line sharing. *Id.* at 428-30.

The court stated that the Commission's impairment decisions should focus on cost characteristics of elements that "are linked (in some degree) to natural monopoly," that can make self-provisioning of elements "wasteful," and that can render the elements "unsuitable" for "competitive supply" by "multiple" firms.

This aspect of *USTA* has no practical significance for this proceeding. As explained in detail below, none of the factors on which AT&T bases its showing of impairment relates in any way to cost characteristics of network elements that are "universal" to all industries or that equally affect incumbents and new entrants in local telephony. Rather, in addition to relying on factors in the *UNE Remand Order's* impairment analysis with which *USTA* found no fault, AT&T's showing of cost disparities rests on economic barriers to entry that are unique to the local telecommunications industry and that cause new entrants who deploy alternate facilities to incur radically greater unit costs than incumbents across the entire relevant ranges of demand. And critically for these purposes, each disparity is directly linked to natural monopoly characteristics of the incumbents' networks. Each disparity further can render the affected element unsuitable for supply by multiple firms, particularly in the absence of unbundling obligations that, in *USTA's* words, "enable a CLEC to enter the market gradually, building up to a level where its own investment would be profitable." *USTA*, 290 F.3d at 424. In this regard, the record here provides direct evidence that deployment of alternative facilities is wasteful, for the broad array of CLECs who have made investments in alternative switching and transmission facilities have been unable to provide service profitably and have, in many cases, gone bankrupt and abandoned their investments.

Finally, as explained more fully in Parts III and Part VI below, the evidence fully accounts for any "variations in competitive impairment" that exist among different classes of

customers or geographic areas. *Id.* at 422. The impairment showings address the different cost characteristics of using self-provisioned elements to serve each relevant class of customer – reflecting, for example, the factors that cause CLECs’ ability to economically use their own switches to vary dramatically depending on whether customer locations generate traffic volumes that require the DS-1 and higher capacity loops that do not require hot cuts or only the use of voice-grade loops. And because the factors that establish impairment now apply in all geographic areas, there can be no separate geographic markets applicable to the Commission’s impairment findings.

**A. Although *USTA* Prohibits Reliance On “Universal” Cost Disparities, It And *Verizon* Establish That The *UNE Remand Order*’s Impairment Analysis Is Otherwise Valid And That Impairment Exists When Barriers To Facilities Entry Give Elements A “Degree” Of Natural Monopoly Characteristics.**

Because the Commission here is reevaluating CLECs’ continuing needs for access to the network elements designated in the *UNE Remand Order*, it is appropriate to begin by reviewing that order and the aspects of its impairment analysis that the *USTA* did and did not question. The *UNE Remand Order* was issued in response to the Supreme Court’s decision in *AT&T v. Iowa Utilities Board*, 525 U.S. 366 (1999), that the 1996 *Local Competition Order* improperly ignored alternatives outside the incumbent’s network and allowed the Commission to treat any cost (or quality) difference as establishing necessity or impairment, even if it had no effect on the CLECs’ ability to provide service profitably.

The *UNE Remand Order* thus adopted a standard in which the Commission analyzed “alternative elements that are available through self-provisioning or from third party suppliers.” *UNE Remand Order* ¶ 21. It asked whether lack of access to a particular UNE would, as a practical, economic, or operational matter, “preclude” CLECs from offering their proposed services in the case of proprietary elements (where necessity must be shown) or “materially

diminish[]” their ability to do so with respect to the non-proprietary elements at issue here (where only impairment need be shown). To make such determinations, the Commission’s rules require assessment of a range of factors, including whether the CLEC would incur increased costs, delays, poorer quality service, operational or technical limitations on its services, or limitations on the ubiquity of its offerings if the UNE were unavailable. *Id.* ¶¶ 72-100.

In terms of the cost disparity component of this multi-factor inquiry, the *UNE Remand Order* identified three relevant cost characteristics: (1) whether the UNE is characterized by fixed costs and economies of scale that mean that new entrants will have higher unit costs than the incumbent, “especially in the early stages of development;”<sup>7</sup> (2) whether deploying the facility would require the new entrant to incur a “sunk cost,” that “cannot be recouped” if the firm ceases service and that erects an economic “barrier to entry” through use of alternate facilities that gives the incumbent “first mover advantages” (*id.* ¶¶ 75, 77); and (3) whether connecting a self-provisioned element to incumbent’s other facilities would cause new entrants to incur “additional costs” that an incumbent does not incur. *Id.* ¶ 79.

In *USTA*, the ILECs contended before the D.C. Circuit – as they claimed in their opening comments here<sup>8</sup> – that each factor in the Commission’s impairment standard was improper. Each of the five factors can be expressed as cost differences (*see* AT&T at 36), but the ILECs contended it was impermissible for the Commission to rely on cost differences *at all* in making determinations of impairment (or of necessity in case of proprietary elements). The ILECs

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<sup>7</sup> *UNE Remand Order* ¶ 76. The Commission recognized that economies of scale are characteristics of “many industries,” but said that the existence of “economies of scale” are “[n]onetheless . . . relevant factors” to consider. *Id.* ¶ 88.

<sup>8</sup> *E.g., compare* Brief of Petitioners, Nos. 00-1015, 1025, at 27-28 (D.C. Cir.) (“ILEC UNE Remand Br.”) *with* Verizon at 55 (“none of the [five] factors” set forth in the UNE is entitled to significant weight “in making impairment determinations”).

further claimed before the Court – as they did in their opening comments here – that the existence of a single competitor that has a unique set of assets (*e.g.*, a cable system) that allows it to provide service customers without using network elements establishes a lack of impairment,<sup>9</sup> that the Commission had improperly focused on whether multiple CLECs could profitably provide service to each of the different classes of customers,<sup>10</sup> and that non-impairment is established by the deployment and “actual” existence of alternative facilities, regardless of whether they are proven profitable.<sup>11</sup>

The *USTA* court accepted only one aspect of one of the challenges to the Commission’s impairment standard, and this holding was itself narrow. First, *USTA* flatly rejected the ILECs’ claim that cost differences are irrelevant to impairment determinations. Rather, it held that “any cognizable competitive ‘impairment’ would necessarily be traceable to some kind of disparity in costs.” 290 F.3d at 426. Indeed, the Court noted that the ILECs’ argument was internally inconsistent, for “the ILECs argued before the Commission and the Supreme Court that the impairment standard embodies the criteria of the ‘essential facilities’ doctrine, which itself turns on concepts of costs” and which applies where competitive duplication would make no economic sense because average costs are declining throughout the range of the relevant market. *Id.* The Court’s holding is similarly a complete response to the *Notice*’s question (§ 19) whether “cost

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<sup>9</sup> Compare ILEC UNE Remand Br. at 30-31 (challenging *UNE Remand Order* (§§ 50, 53, 55) for failure to adopt an “essential” to competition standard) with SBC at 35 (UNEs should be unavailable except in those situations in which “an efficient competitor cannot compete at all except with UNEs”); Verizon, at 46-48 (cable competition establishes that a “competitive market already exists” and the absence of impairment); *accord*, Qwest at 6-8.

<sup>10</sup> Compare ILEC UNE Remand Br. at 27-28 (challenging *UNE Remand Order* (§ 54)) with BellSouth, at 4, 22-23; Qwest at 11-12.

<sup>11</sup> Compare ILEC UNE Remand Br. at 44-47 with BellSouth at 4, 22; *accord* Qwest at 11-22.

should be afforded less weight than other factors” in the impairment analysis. It plainly should not. *See also* AT&T at 36.

At the same time, the *USTA* Court concluded that the *UNE Remand Order*’s discussion of the kinds of cost disparities that can establish impairment was overbroad in one respect: the “open ended” reliance on economies of scale that it purportedly permitted. *USTA*, 290 F.3d at 426. The Court noted that the *UNE Remand Order* had (as one factor in its discussion of switching) relied on the comparatively modest economies of scale that exist in switching *equipment* – that it is cheaper to buy a 20,000 line switch than four increments of 5,000 each – and had referred to each CLEC’s “probable inability to enjoy scale economies comparable to ILECs’ *particularly in the early stages of entry.*” *Id.* at 427 (emphasis in original). The Court noted that “average unit costs are necessarily higher at the outset for any new entrant into virtually any market” and that the Commission had relied on “cost disparities faced by virtually any new entrant in any sector of the economy, no matter how competitive the sector” and “that are universal as between new entrants and incumbents in *any* industry.” *Id.* at 426-27 (emphasis in original). The Court stated that the Commission’s rule did not require it to focus on the presence of the economies of scale “*over the entire extent of the market*” that render an element an essential facility and a natural monopoly, and that mean that competitive supply can turn out to be “wasteful.” *Id.* at 427 (emphasis in original). The Court concluded that “[w]ithout a *link* to this sort of cost disparity, there is no particular reason to think that the element is one for which multiple, competitive supply is unsuitable” (*id.*), and it held that the Commission’s impairment analysis was impermissible insofar as it “link[ed] impairment to universal characteristics, rather than ones linked *in some degree* to natural monopoly.” *Id.* (emphasis added)

*USTA* relied upon – and must obviously be read in light of – the Supreme Court’s

decision in *Verizon*, which had been issued only days earlier. Notably, *Verizon* did not expressly exclude “universal” cost disparities in making impairment determinations, but rather stated that entrants can access ILEC facilities that are “very expensive” or “unnecessarily expensive” to duplicate. Indeed, this is the passage from *Verizon* on which *USTA* relied in concluding that “universal” cost disparities may not be dispositive of impairment. *Id.* at 426 (*quoting Verizon*, 122 S. Ct. at 1672 n.27). Most pertinently for present purposes, *Verizon* held that the Act is designed to allow “hundreds of smaller entrants” to obtain access to elements that are “costly-to-duplicate” even if firms with the “resources of a large competitive carrier such as AT&T or WorldCom” could in fact duplicate the elements. *Id.* *Verizon* and *USTA* thus establish two fundamental points about the impairment inquiry that is required by the Act.

First, as *Verizon* made explicit, a UNE does not have to be a natural monopoly that can economically be provided by only a single firm, for the Act requires unbundling even if there are some “large competitive carrier[s]” that can duplicate the element. *Verizon*, 122 S. Ct. at 1672 n.27. Thus, *USTA* stated that it “did not intend to suggest” that the Act requires “use of the criteria of the essential facilities doctrine” and permits unbundling of only those elements that can in fact be provided by only a single firm as a matter of economics. 290 F.3d at 427. In this regard, *USTA*’s holding that a UNE must have “some degree” of the “characteristics” of a “natural monopoly” cannot, by its terms, be read as a holding that an element must be found actually to *be* a natural monopoly before it may be unbundled. Rather, an element has “some degree” of the characteristics of a natural monopoly if particular CLECs (or if all but exceptional CLECs) will have average unit costs materially higher than the ILECs across all relevant levels of demand, or if the CLECs face other economic barriers to entry through self-provisioned facilities.

In this connection, *Verizon* foreclosed – and *USTA* did not uphold – the ILECs’ claim (repeated in their opening comments)<sup>12</sup> that the existence of a cable television operator that provides local telephone service over their cable facilities establishes that a competitive market already exists and demonstrates the absence of impairment. The realities are that cable TV systems are effectively no more economic to duplicate than are local telephone networks, and cable providers are not subject to unbundling requirements under the Act.<sup>13</sup> Thus, the existence of a cable provider in an area neither shows that other competitors can economically construct their own network facilities nor that they can obtain such functionalities from a source other than the incumbent. The *UNE Remand Order* thus rejected the ILECs’ claim on the ground that the plain terms of section 251(d)(2) required that unbundling determinations be based on the needs of “all requesting carriers” and did not require or permit them to be “calibrated” to the individual firm whose assets and business plan “allows it to rely the least on the ILEC’s network.” *Id.* ¶ 53. It further held that the ILECs’ claims were barred by the Act’s legislative history, which established that the existence of cable competition cannot alter the incumbents’ unbundling obligations, and the fact that accepting the incumbents’ argument would result in “stagnant duopolies” that would defeat the Act’s objective of “creat[ing] competition among multiple providers of local service that would drive down prices to competitive levels.” *Id.* ¶ 55.

Indeed, there are still other respects in which the terms of the Act foreclose the incumbents’ proposed “essential to competition” standard. In particular, the Act requires a showing that access is “necessary” before CLECs can be required to unbundle proprietary

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<sup>12</sup> See *Verizon* at 46-48; *Qwest* at 6-8.

<sup>13</sup> See *Z-Tel* at 22 (“A cable operator, for example, may not access to all of the elements of the platforms but the Act does not require Z-Tel to buy a cable company in order to compete in the mass market.”).

elements (which are not involved here), and even for proprietary elements, the Act requires that the Commission ask if access is necessary not for *any* competition to occur, but for the *particular* CLEC who has sought access to provide the service that it seeks to offer. In making a “necessary” determination for proprietary elements based on cost disparities, the question is thus whether the cost disparities will “preclude” the CLEC from providing that service if access is denied. *UNE Remand Order* ¶¶ 44-47. And whatever the meaning of the “necessary” requirement that applies to proprietary elements, the Act makes explicit, and the Commission has elsewhere acknowledged, that the “impair” standard that applies to non-proprietary elements is a “different, and less demanding test.” Brief of Respondents, Nos. 00-1015, 1025, at 25 (D.C. Cir.). Because it requires a showing only that CLECs’ ability to offer service would be “materially diminished” if access to a UNE were denied, cost disparities are sufficient to establish impairment if they demonstrate that CLECs’ ability to provide service would be materially lessened if they could not access the element on an unbundled basis. Thus, it is a textual impossibility to read these statutory terms as adopting an essential facility requirement—as *Verizon* and *USTA* establish.

*Verizon* also foreclosed – and *USTA* did not uphold – the incumbents’ related challenge to the *UNE Remand Order*: their contention that the fact that CLECs are serving or could economically serve a subset of customers without use of a UNE means that denial of access to that UNE will not impair their ability to provide service to customers generally.<sup>14</sup> The Commission properly rejected this claim because “the ability of one or more competitors to serve

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<sup>14</sup> This claim is now pressed mainly by BellSouth, which contends that when there is “actual existence” of deployed alternative facilities to serve certain customers, “there is no need to undertake a ‘material diminishment’ analysis,” because “a carrier’s self-provisioning or alternative procurement of elements outside of the ILEC network, in and of itself, proves that requesting carriers are not impaired . . . .” BellSouth at 4, 22-23; *see also* Qwest at 11-12.

certain customers in a particular market is not dispositive of whether competitive LECs without unbundled access to the ILEC's facilities are able to compete for other customers in the same market or for customers in other markets." *UNE Remand Order* ¶ 54. An impairment analysis must take into account whether there are economic or technical factors that allow a facility economically to be deployed and used to serve one customer or class of customers, but that do not apply to other customers. For example, while switches can be deployed and customer locations with DS-1 or higher capacity loops (that do not require hot cuts) can be economically connected to these switches, just the opposite is the case for customer locations served by voice-grade loops that require hot cuts (and that increasingly are served using DLC, which presents additional impediments to CLECs' ability to connect them to their own switches). CLECs that attempt to use a switch to serve such customers thus face dramatically higher costs than the incumbents, often precluding (and at a minimum impairing) their ability to do so profitably.

*USTA* recognized the same point. It did not accept the ILECs' claim that deployment of a switch to serve one class of customers establishes an absence of impairment for all customers. To the contrary, *USTA* expressly criticized the *Order* for purportedly failing to conduct a more "nuanced" analysis that addressed "market specific variations in competitive impairment." 290 F.3d at 422, 425-26. Lumping together customers who have different cost characteristics and making determinations of non-impairment based on facts applicable to only certain customers is the antithesis of such a nuanced determination.

Second, particularly when read in light of *Verizon's* holdings that the Act's objectives require maximum unbundling, the other fundamental requirement of *USTA* is that the *only* cost disparities that cannot support a finding of impairment are those that are "universal" to all industries and apply to incumbents and new entrants alike. In particular, *USTA* precludes only

findings of impairment that rest *solely* on the fact that elements have fixed costs that give them surmountable economies of scale and mean only that CLECs will have higher average unit costs than the incumbents “in the early stages of entry.” *USTA*, 290 F.3d at 427.

Conversely, *USTA* did not – and could not under *Verizon* – disapprove any of the other cost factors that the *UNE Remand Order* identified as relevant to an impairment analysis. Each of these other factors addresses cost or other disparities that erect economic barriers to entry through alternative facilities. Each means that new entrants have higher average costs than incumbents across all the relevant ranges of demand. Each means that alternative supply of an element can be wasteful, or that it is otherwise unsuitable for competitive supply by multiple firms. Each is also linked to natural monopoly characteristics of the incumbents’ networks. As explained below, that is the case with the two other cost characteristics of network elements that the *UNE Remand Order* held to be relevant and that the *USTA* court did not discuss, much less disapprove: (i) whether incumbents have first mover advantages because new entrants must make “sunk” investments and (ii) whether connecting self-provisioned switching to the incumbents’ loops requires new entrants to incur “additional costs” that the incumbent does not incur. *UNE Remand Order* ¶¶ 77, 79.

**B. Impairment Is Established By The Presence Of Economies of Scale, Sunk Costs Or Other Entry Barriers That Are Linked To Natural Monopoly Characteristics Of The ILECs’ Networks And That Make The Elements Unsuitable For Multiple Competitive Supply, And The Fact Of “Actual Deployment” Of Facilities Is Insufficient To Establish Non-Impairment.**

For these reasons, responding to *USTA* and *Verizon* should present no difficulties for the Commission on this record, for it shows that the CLECs’ principal impairments are related directly to the natural monopoly characteristics of the ILECs’ ubiquitous networks. In this regard, there are two fundamental aspects of telecommunications generally – and of local telecommunications in particular – that distinguish it from other industries and that, in

combination, mean that multiple competitive supply of network facilities is generally wasteful and will not occur even when it could be economically feasible *unless* new entrants have the ability first to build up a customer base by leasing ILEC network elements. One of these cost characteristics was discussed in *USTA* – that telecommunications equipment and facilities are characterized by fixed costs and economies of scale. For some, but not all, of these network elements, the economies of scale are of such a magnitude that the incumbents’ average costs in deploying them decline across all relevant levels of demand and are lower than those that all new entrants (or all but certain uniquely situated new entrants) could achieve. That is the case with all transmission facilities, *i.e.*, loops and transport, and extends to other elements that are physically integrated with these transmission facilities (*e.g.*, switches that are hard wired to voice-grade loops). Under some definitions, this fact alone establishes that a facility has natural monopoly characteristics. *See* Willig Reply Dec. ¶ 19.

And there is a second, additional characteristic that unequivocally applies to telecommunications transmission facilities. It was discussed in the *UNE Remand Order* and was not addressed, much less disapproved, by *USTA*. It is that once investment is made in these facilities, the investment is effectively “sunk,” in the sense that they cannot be re-deployed for some other use in the future. *Id.* ¶ 75. It is elementary economics that when a new entrant needs “to incur sunk costs” in order to challenge the incumbent, the new entrant incurs costs and risks that the incumbent did not, and the need to incur sunk costs constitutes a significant barrier to entry if the facilities it must duplicate are characterized by any significant economies of scale. *UNE Remand Order* ¶ 77; Willig Reply Dec. ¶¶ 21-22.

The incumbents deployed facilities adequate to serve all customers, secure in the knowledge that they would face no competition and would be able to charge fully compensatory

rates – as they did for a century before the 1996 Act was passed. By contrast, precisely because the incumbent has deployed facilities that are adequate to serve all needs of all customers (or can be upgraded to do so at marginal costs that are a tiny fraction of those a new entrant would incur if it tried to replicate those facilities), the new entrant is in a position that entry would require it to invest in wholly duplicative facilities that cannot be used for any other purpose if the investment fails, and that it may be unable to attract sufficient revenues to recover the sunk costs for either of two reasons. First, it must attract customers away from an entrenched monopolist who has established relationships with all customers, and it inherently faces risks that it may not be able to attract sufficient customers. *See UNE Remand Order* ¶ 77; Willig Reply Dec. ¶ 35. Second, even if the CLEC can attract customers, it may not generate sufficient net revenues, because the new entrant will need to incur marketing and other expenses that the incumbent does not in attempting to dislodge entrenched customers (*see id.* ¶ 21, 35) and because the incumbent can respond to competition by pricing at its low marginal costs (*see id.* ¶ 25); *UNE Remand Order* ¶ 77. Indeed, the *only* circumstances in which a new entrant's efforts at competitive supply can truly be "wasteful" is when it must make such sunk investments that cannot be used for any useful purpose if it exits the market. *See Willig Reply Dec.* ¶ 22.

Thus, even if the scale economies of a network element could theoretically be "surmountable," there is still a barrier to entry through alternative facilities if the element *also* requires a CLEC to incur sunk costs. In this event, new entrants generally will not construct facilities at all – and certainly would not attempt to enter on a ubiquitous scale even if that were otherwise feasible – unless they can first establish a customer base to which they provide local services by leasing facilities from the incumbent. *See id.* ¶¶ 20-21.

That, of course, is what occurred in long distance. Before that market was opened to

competition, it was widely believed that it had natural monopoly characteristics due to the combination of scale economies and the sunk nature of any long haul transmission investments. That was so even though establishing a national long distance network required the construction only of intercity “trunk” transmission facilities that hook up to some 164 LATAs, rather than (in the case of local telephony) building transport facilities that connect tens of thousands of wire centers with each other and loops that connect hundreds of millions of lines to the appropriate wire center. *See Willig Dec.* ¶¶ 211-14. And while it was arguable that the scale economies that characterized the long distance facilities were surmountable, all recognized that the transmission investments that new entrants would make would be “sunk” once they were made in that they could not be deployed for some other purpose. In view of the combination of substantial economies of scale and the need to incur sunk costs, it was recognized that entry into the long distance market simply would not occur on a broad scale – and there could not be a “market test” of whether long distance was in fact a natural monopoly – unless new entrants could build up a customer base before constructing alternative facilities by leasing the facilities of the incumbent. *See id.* ¶¶ 215-22.

Thus, to allow a market test of whether long distance was a natural monopoly, the Commission gave new entrants the right to provide service by reselling the incumbent’s volume discounted long distance service and obtaining exchange access at deep (55%) discounts, and new entrants used these leasing rights to establish a customer base and to build national long distance networks gradually. *See Willig Reply Dec.* ¶¶ 215-16. The experience with long distance service was the model for the network element provisions of the Act. H.R.Rep. No. 104-204, at 89 (1995). Notably, the Commission has determined that the only mechanism through which new entrants can enter the entire local market (*i.e.*, by providing exchange access

as well as exchange services) and acquire the customer base, customer usage, and traffic information that would enable them efficiently to deploy alternative facilities is by leasing unbundled network elements under section 251(c)(3). *Local Competition Order* ¶¶ 332-33 (1996); *UNE Remand Order* ¶¶ 5, 7, 112, 127.<sup>15</sup>

In these regards, although the *USTA* Court believed that the mere existence of “surmountable” economies of scale *alone* should not establish impairment, it acknowledged that one of the key benefits of “access to UNEs” is that it may enable a CLEC to enter the market gradually, building up a customer base up to the level where its own investment would be profitable.” 290 F.3d at 424. *USTA* thus recognized the benefits of unbundling where there are sunk costs, for it is the sunk nature of facilities investment that makes such “gradual” entry beneficial.

It is clear, however, that the combination of sunk costs and economies of scale do more than establish barriers to competitive supply of local loops and other telecommunications transmission facilities. As the *UNE Remand Order* holds, these same entry barriers can apply to switching equipment that is connected to loops and other transmission facilities, especially when breaking the physical loop-switch connection requires the CLEC to incur “additional costs” that the ILECs do not. *See, e.g., id.* ¶¶ 77, 265-66. *USTA* did not disapprove this holding either, for the fact that CLECs must incur such additional costs to access their customers’ loops is a classic entry barrier that is directly “linked” to the natural monopoly characteristics of the local loop.

Finally, *USTA* and the terms and history of the 1996 Act squarely foreclose the ILECs’ claims that non-impairment is established solely by proof of “actual deployment” of facilities to

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<sup>15</sup> The form of resale of the incumbent’s “retail” services that is authorized by section 251(c)(4) allows the provision only of exchange service and provides neither the customer base nor the information required to build alternative facilities. *Local Competition Order* ¶¶ 332-33.

serve a particular class of customer. The reality is that, by eliminating legal barriers to entry, the Act permitted market tests of whether and in what conditions particular ILEC facilities have natural monopoly characteristics or are in fact suitable for multiple competitive supply. Indeed, if the evidence shows – as it does here – that carriers have deployed facilities but have been unable to use them to provide service profitably, that is direct evidence that investments were wasteful and that the element is unsuitable for competitive supply. See Willig Reply Dec. ¶¶ 81-83. Conversely, the only actual marketplace experience that could establish that CLECs are not impaired in using an element is evidence that CLECs are able to provide service *profitably* by obtaining an element's functions outside the ILECs' networks. That is established by the Supreme Court's holding in *AT&T v. Iowa Utilities Board*, for the deficiency that the Court found with the Commission's standard in the 1996 *Local Competition Order* was that it permitted elements to be unbundled even when CLECs could earn "profits of 99%" from providing service through alternatives available outside the ILEC's network. 525 U.S. at 389-90. Thus, evidence that facilities have been deployed cannot establish a lack of impairment unless the actual experience of multiple CLECs also demonstrates that the service they provide through self-provisioned facilities is economic – and profitable.

Thus, *USTA* did not accept the incumbents' claims that actual deployment of facilities alone establishes that CLECs are not impaired without access to UNEs. In particular, the ILECs' challenged the *UNE Remand Order*'s determination that the evidence of deployment of switches to serve business customers was insufficient to demonstrate that CLECs would not be impaired in providing service if they were unable to obtain unbundled switching. There, the Commission found that it was "too early to know whether self-provisioning is economically viable in the short run." *UNE Remand Order* ¶ 256. This holding was quite prescient, for with the exception of

CLECs serving customers using high-capacity loops, CLECs who invested in switching facilities have failed to attract sufficient traffic and revenues to achieve minimum efficient scale. *USTA* thus did not accept the incumbents' proposed "actual deployment" standard. Rather, by holding that the question is whether self-supply is "wasteful," the decision quite plainly requires consideration of whether CLECs that have deployed facilities have been able to provide service profitably or have instead been left with underutilized facilities – or even gone bankrupt or abandoned them.

In this regard, as shown in Part VI below, that has been the actual marketplace experience. Contrary to the ILECs' claims, CLECs did *not* withhold investments in alternative facilities because they could obtain UNEs at TELRIC-based rates. Rather, CLECs over-invested in their own switches and other network equipment, for they deployed facilities that they could not obtain sufficient traffic and net revenues to support.

**C. AT&T's Impairment Showings Do Not Rely On Any "Universal" Cost Characteristics, But Are Based On Cost Disparities That Are Linked To Natural Monopoly Characteristics Of Local Telecommunications Facilities And That Establish That There Are Substantial Barriers To Entry Through Use Of Alternative Facilities.**

AT&T's evidence establishes impairment under *USTA* and *Verizon*. AT&T's impairment showings do not rely at all on cost disparities that are "universal" between incumbents and new entrants in "any" market. AT&T's evidence that CLECs are impaired without access to loops, transport, and unbundled switching for voice-grade loops all rests exclusively on cost characteristics that are "linked" – not just "in some degree" but pervasively – to natural monopoly characteristics of the incumbents' transmission elements. These characteristics can make alternative provision of loop, transport, and switching elements wasteful and severely impair the ability of multiple CLECs to supply them competitively. Indeed, competitive supply in the current market environment can occur only if the Commission (1) maintains the

requirements that loop and transport facilities remain available nationally, (2) assures CLEC access to NGDLC loops, (3) modifies the switching “carve out” so it applies only to discrete customer locations served by DS-1 and higher capacity loops, and (4) entirely eliminates its “interim” use and commingling restrictions on loop/transport combinations.

**Loops.** The record here unquestionably demonstrates that voice-grade loops – be they entirely copper or copper-fiber combinations in Digital Loop Carrier (“DLC”) architecture – are quintessential examples of natural monopoly facilities that have average unit costs that decline throughout all relevant levels of demand, that cannot be replicated without sunk investments, and that cannot be economically supplied by ordinary CLECs. This is also the case with high-capacity loops. Those facilities are also characterized by steadily declining average costs, and it is only in rare and exceptional circumstances that a CLEC can deploy a high-capacity loop at economic costs that are close to those of the ILEC. But even when those conditions exist, the facts that CLECs would have to make sunk investments that duplicate the incumbent’s and that CLECs have to individually obtain building access and rights of way that incumbents receive as a matter of course due to their first mover advantages mean (1) that a CLEC cannot rationally and economically deploy a loop unless it first serves customers by leasing unbundled loops, (2) even after it obtains a customer commitment that would allow deployment of an alternate loop, it will require unbundled loops during the lengthy period of time required to construct loops, and (3) in some circumstances, building access and right of way impediments will not just further delay, but will preclude entirely the provision of service through alternative facilities.

All these cost disparities are directly linked to the natural monopoly characteristics of loops and other factors that render them unsuitable for supply by multiple firms. They are linked to scale economies that give the incumbents average costs that decline over the entire range of

the demand. They are also linked to first mover advantages that incumbents enjoy due to the sunk nature of loop investments and the facts that building owners and municipalities place less value on second and third entrants than they do on the ILECs as the first entrants. Collectively, these factors mean that loops will be competitively supplied only in rare circumstances and, even then, loops can generally be constructed only if CLECs first have the right to lease unbundled loops. Thus, there is no general geographic or product market or submarket in which lack of impairment could be found, and no basis for “granular” exceptions to unbundling requirements for high-capacity loops.

Finally, the evidence establishes that the Commission’s existing rule that bars CLECs from accessing NGDLC loops in central offices – and the requirement that they do so by collocating in remote terminals – is a separate source of impairment, for it, too, creates cost disparities that are directly linked to the natural monopoly characteristics of the local loop. The rule denies CLECs nondiscriminatory access to loops that have natural monopoly characteristics, and forces them to incur wasteful and unnecessary costs if they attempt to do so.

**Transport.** Dedicated transport has the same monopoly characteristics of loops. Because the fixed costs of all transmission facilities (trenching, support structures, and laying cables) are huge, and because the ILECs’ costs of adding incremental capacity on any one route (activating dark fiber and adding new electronics to lit fiber) is very small, it is inherently true that incumbents can provide transport on any point-to-point route at lower average costs than a CLEC. These natural monopoly characteristics are heightened by the economies of scope that ILECs have because loop and transport facilities can use common structures.

Indeed, it is only in exceptional circumstances that CLECs will have sufficient volumes to enable them to serve a point-to-point route at costs that are even close to those of an

incumbent. Even then, the sunk nature of such investments means no prudent CLECs will make them until they have a sufficient customer base and commitments to provide the revenue stream needed to support such a project over the long term. Moreover, disparities in obtaining rights of way in the same time and at the same unit cost as the ILECs – stemming from the fact that municipalities see little incremental value in allowing second, third, or fourth providers to dig up streets and maintain transmission facilities – means that alternative transport cannot be built at all on many routes and will be delayed on others. As with loops, all of these factors are linked to the natural monopoly characteristics of the transport element.

The evidence similarly demonstrates that CLECs are impaired if they continue to be denied unrestricted access to existing and new loop/transport combinations and if the Commission does not eliminate the use and commingling restrictions that apply to them. The use restrictions prevent a CLECs from using loops and transport facilities, both of which have natural monopoly characteristics, to provide exchange access services in competition with the incumbents, and the commingling restrictions have prevented them using these same natural monopoly facilities to provide local service. In addition, eliminating the restrictions on existing combinations (and rejecting ILEC claims that they should apply to new combinations) allows CLECs who self-provision switching to avoid the significant costs of collocating transmission equipment in every incumbent office where they serve customers and eliminates this barrier to entry for switch-based carriers.

**Switching.** Switching presents different issues from transmission facilities. Switching is relatively scaleable compared to transmission elements, and switches can often be redeployed for other purposes (albeit with some cost penalty) if a CLEC exits a particular local market, so switching investments are not entirely sunk once they are made. And although switches take a

significant amount of time to deploy, they do not present many of the rights of way and building access complications related to transmission facilities. Thus, AT&T has *not* maintained that (other than capital constraints) there is a significant impediment to a CLEC's ability to purchase and deploy a switch, and AT&T's evidence of impairment related to unbundled switching does not depend on these or any other arguably "universal" cost characteristics of switching.

Instead, the source of the CLECs' impairment related to unbundled switching is directly – indeed physically – linked to the natural monopoly characteristics of the ILECs' loop plant and is inherent in the very architecture of the incumbents' local exchange networks. The CLECs' impairment results from the fact that ILECs' exchanges were designed to act as single-provider networks, with no view toward providing other switch-based local carriers with access to monopoly loops that is comparable to the access that incumbents receive to those same loops. There are thus two resulting sources of impairment to a switch-based local carrier.

First, and most critically, the incumbents' switches are "hardwired" to their customers' loops, which, of course, themselves have natural monopoly characteristics and cannot be duplicated by typical CLECs. Although this architecture may have been efficient and reasonable in a monopoly environment, the consequence of this network architecture is that CLECs who self-provision switches cannot obtain nondiscriminatory access to natural monopoly loops, but inherently incur costs, delays, and degradations to their service that the incumbents do not incur. These costs are substantial for all customers served by ordinary voice-grade all-copper loops, for even beyond the additional costs that result from the required "hot cuts," they impose delays and service quality problems that market experience shows customers will not accept. These costs and practical impairments completely preclude CLECs from serving low volume customer locations, which must be served by a process that can handle very large volumes as quickly and

as competently as the electronic systems used to change long distance carriers or to change local carriers using UNE-P. And the costs and technical quality and access problems can be even greater in the case of the large (over 25%) and rapidly growing percentage of customers served through DLC loops.

Second, CLECs who self-provision circuit switches incur another type of "additional cost" that incumbents do not and that also are linked to the natural monopoly characteristics of the local exchange. In particular, because incumbents' central offices were designed on the assumption that local service would be provided by a single monopolist, they do not accommodate switching equipment of multiple providers. Because today's circuit switches are too large to be collocated in a central office, the consequence is that CLECs who self-provision switches must also incur the significant costs of collocating digital loop carrier equipment in every central office in which they serve customers (if loop-transport combinations are not made available free of commingling restrictions) and must, in all events, incur distance-sensitive transport "backhaul" costs to carry calls between the central office and the place where their own switch is deployed. Notably, these CLEC collocation, multiplexing, and transport costs are incurred as a substitute for the functions that ILECs obtain at radically lower cost by merely running a short jumper wire across its main distribution frame.<sup>16</sup> Although it is possible that there are some circumstances in which CLECs are able to place switches in locations that are more efficient to serve the needs of particular customers (for example in providing service to high volume customer locations with high-capacity loops), generally there are no or few offsetting savings, and any savings that exist are not remotely sufficient to offset the additional

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<sup>16</sup> For loops served by IDLC, the feeder trunks run directly into the ILEC switch, meaning that ILECs do not even need a cross-connect.

costs that CLECs alone occur when they attempt to serve customer locations whose low demand only warrants the use of voice-grade loops.

All these cost disparities are linked to natural monopoly characteristics of the ILECs' local exchanges. And although CLECs may have the ability to overcome these and other inequalities for large customer locations that generate large amounts of traffic and are served by DS-1 or higher capacity loops that do not require "hot cuts" to transfer each line, the unequivocal fact is that customers served by voice-grade loops cannot be practically or economically served by a CLEC switch.

**D. AT&T's Showing Of Impairment Also Rests On Meaningful Practical Differences In Timeliness, Quality, Operational And Technical Impediments, And Ubiquity.**

*USTA* recognized that all the impairment "factors" set forth in the *UNE Remand Order* can be expressed as differences in cost, although it is obviously difficult to quantify the four factors that are expressed in different terms: delay and differences in timeliness, differences in quality, operational and technical impediments, and differences in ubiquity. *USTA* also did not disapprove of the use of any of these factors, for none represent disparities that are universal between new entrants and incumbents in all industries, and, more fundamentally, each affects CLECs in ways that incumbents are not, and each prevents CLECs from offering service on terms comparable to the ILECs' service. Because AT&T's showings of impairment can be expressed in terms of each of these factors, the ILECs' comments have also made arguments that these additional factors are inapplicable or no longer valid. None of these claims has any merit.

**Delay And Timeliness.** Delays that would result from denials of access to a UNE materially diminish CLECs' ability to provide service in multiple ways. For example, hot cuts cause delays that have prevented CLECs from serving the overwhelming majority of customer locations, and even in the relatively rare cases in which it might be economically feasible to

deploy alternative loops or transport, delays associated with construction and obtaining rights of way or building access would prevent a CLEC from offering service even if it had otherwise obtained firm commitments from customers.

The ILECs' arguments for ignoring these obviously customer-affecting concerns are specious. *See* Willig Reply Dec. ¶¶ 32-33. They claim that such concerns have lost their relevance because "CLECs have now had more than 5 years in which to deploy and/or make arrangements with alternative sources." Qwest at 14 n.22; *see also* Verizon at 58-59. But that assertion is not remotely responsive to the ways in which the Commission has found that delay can create impairment. Moreover, it is based on the absurd premise that CLECs could (and should) have begun building *ubiquitously* in 1996. Particularly in light of the current crisis in the capital market for telecommunications, any such argument is baseless.

Delay is not a one-time phenomenon that occurs only when a CLEC first decides to enter a market. To the contrary, the Commission has emphasized that the delay does not only affect the "start-up time required for a competitor to enter a market," but also affects "the time it would take a competitor that has already entered the market to expand its operations to serve more customers." *UNE Remand Order* ¶ 89. Even with respect to "start-up time," of course, the ILECs' argument is specious, because it would foreclose entry by any new CLEC – one that has not been in the market for "more than 5 years." More fundamentally, even those carriers that have already entered "must be able to initiate service promptly upon the request of their customers" "in order to compete effectively." *Id.* ¶ 93.

Thus, the kinds of delays that the Commission has relied upon in the past, such as those relating to rights of way access (*see id.* ¶¶ 186, 384), do not cease to apply for new customers, even if a CLEC had served other customers for "more than five years." To the contrary, these

delays exist “on a recurring, ongoing basis as to CLECs that have already ‘entered’ a market and are seeking to win new customers, to build and connect facilities for those customers, and to compete with the ILEC in offering timely commitments for due dates when those customers are choosing a carrier.” *Id.* ¶ 93 n.161 (quoting comments). The ILECs do not even attempt to explain why those delays have lost their relevance to “impairment.”<sup>17</sup>

**Quality.** Other impairments that AT&T has demonstrated can also be expressed as quality differences. Again, the outages and service degradations associated with hot cuts fall into this category. Quality is also the complete answer to the incumbents’ startling suggestion that the competition provided by the nation’s wireless carriers is sufficient to satisfy the Act’s objective of “creat[ing] competition among multiple providers of local service.” *Compare UNE Remand Order* ¶ 55 with ILEC Report at IV-12-14. Whereas the ILECs’ networks are engineered to have call completion rates in excess of 99.9%, wireless networks’ call failure rates are 30% or higher. For this reason, the most that ILECs can claim about wireless services is that a relatively small fraction of customers regard wireless services as a substitute for second telephone lines. Thus, the ILECs’ proposal that CLECs pursue wireless alternatives is a proposal that CLECs be relegated to service that is of materially poorer quality and that virtually no customers regard as substitutes for first telephone lines, and that the vast majority of customers do not even regard as substitutes even for second lines.

With respect to direct assessment of “quality” issues, SBC correctly acknowledges that such issues are relevant to impairment, but Verizon claims they are not. *Compare* SBC at 35

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<sup>17</sup> SBC also claims that it should be sufficient if CLECs can provide service within two years. SBC at 35. No customer would wait that long, and the ILECs could easily use that period to “lock-up” the customer with “long-term contracts.” *UNE Remand Order* ¶ 91. The Commission thus properly rejected SBC’s two-year time frame when it was proposed by SBC’s predecessor, Ameritech, finding it “unreasonable and inconsistent with the objectives Act.” *Id.* ¶ 92.

with Verizon at 59. Verizon simply states that “there is no basis to believe that network elements from non-ILEC sources are of lower quality than ILEC UNEs.” Verizon at 59. However, no one has ever suggested that such a blanket determination should be made, and AT&T does not claim that using facilities from non-ILEC sources will always create quality problems. However, when there are specific identified quality differences – such as, for example, when the inability to properly provision hot cuts means that CLECs’ customers suffer delays and outages that ILECs’ customers do not – it would be arbitrary and unlawful to ignore them.<sup>18</sup>

Verizon also claims that, “[i]n any event,” the Supreme Court has held that “mere” differences in quality do not constitute “impairment.” Verizon at 59. This is true but irrelevant. Indeed, it is the same misstatement the ILECs make with respect to the Supreme Court’s decision on “cost.” A “mere” difference in quality does not necessarily constitute impairment (which is the mistake the Court held that the Commission made in the *Local Competition Order*), but a *material* difference in quality does create an impairment, and neither the Commission nor any reviewing court has ever held otherwise.

**Operational And Technical Impediments.** Hot cuts, again, are an obvious example of technical and operational impediments to the use of non-ILEC network elements, as are the

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<sup>18</sup> The importance customers attach to quality – and the ILECs’ recognition of that importance in all forums except this one – is underscored by the ILECs’ marketing and advertising campaigns. SBC, for example, has been running a series of advertisements suggesting that business customers could face massive quality problems if they switch local carriers. In one such television commercial, a businessperson is approached by a CLEC and asked to consider changing carriers. He nervously thinks, “Hmm, we changed our coffee vendor once.” The commercial then shows the coffee machine spewing hot coffee directly in people’s faces. The businessperson then explains to the CLEC, “Uhh, we’re happy with what we’ve got.” Finally, the announcer asks “Why risk it? Stick with the one you know.” Such commercials are particularly outrageous in light of the fact that quality problems experienced by CLEC customers are at least as likely to arise from ILEC mistakes (in performing hot cuts or in their OSS) as CLEC mistakes.

rights of way and building access problems associated with attempting to use alternative transmission facilities. Thus, the ILECs now contest the Commission's settled holding that "material operational or technical differences in functionality that arise from interconnecting alternative elements may also impair a requesting carrier's ability to provide its desired service." *UNE Remand Order* ¶ 99.

SBC contends that the Commission should deal with such concerns "directly," rather than by examining them in determining which UNEs should be made available. SBC at 36-37. That objection is silly. If Commission or State commission action can and does eliminate a particular operational impediment – e.g., by having ILECs implement electronic loop provisioning – then by definition that impediment will no longer exist and will not be considered in the impairment analysis. But electronic loop provisioning has nowhere been implemented, and the problems that have plagued the manual hot cut process, for example, reflect at least in part inherent operational limitations that other regulatory action have not been able to overcome. That is vividly confirmed by the Comments of the New York PSC, which has worked assiduously and with great dedication in this area. *See New York* at 3-4 ("There are still major issues that hamper the development of facilities-based competition. Until hot-cuts can be performed in much greater volumes, CLECs' lack of access to the UNE-P will materially diminish their ability to provide local service.") Unless and until these operational problems are in fact "directly" eliminated, they will continue to impair CLECs' ability to provide service through alternative facilities and must be considered in the impairment analysis.

Indeed, SBC is wrong not merely factually, but also legally, in suggesting that operational problems in connecting facilities have "nothing to do with" access to UNEs. SBC 36-37. The Commission held in the *Local Competition Order* (¶ 312) that the "access to network

elements” required by section 251(c)(3) “refers to both the physical and logical connection to the element and the element itself.” Accordingly, the Commission must examine the “connection” between the element and adjacent facilities in determining whether the failure to provide “access to such network elements” (47 U.S.C. § 251(d)(2)(B)) would create an impairment.<sup>19</sup> Further, as the *UNE Remand Order* held (§§ 62-63), the Act requires a determination of the effect a denial of access to a particular network element would have upon the “services” that the CLEC seeks to offer. When, as in the case of unbundled switching, such denial would prevent the CLEC from offering service to some customers altogether, and would materially delay and degrade the service to others, there is no question but that impairment exists. Finally, the Supreme Court’s decision in *Verizon* recognizes that the Commission rules should “ensure that the statutory duty to provide unbundled elements gets a practical result,” and “remove practical barriers to competitive entry into local-exchange markets.” *Verizon*, 122 S. Ct. at 1683, 1685.

**Ubiquity.** The Act makes the creation of local competition on the “broad[est]” possible basis an “end in itself” (*Verizon*, 122 S. Ct. at 1654), and differences in ubiquity are directly and fundamentally related to the cost disparities that give elements natural monopoly characteristics. As Professor Willig explains, when, as is the case for the elements at issue here, facilities are characterized by economies of scale and require sunk investments (or are physically linked to facilities with these characteristics), there are immense barriers to facilities-based entry on a large scale and a new entrant will provide service through alternative facilities only if it can do so on a very small scale. See Willig Reply Dec. §§ 19-47. But that poses other problems for the

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<sup>19</sup> Verizon separately contends that it is not relevant to “impairment” that a CLEC has to “incur the same costs or perform the same tasks” as the ILEC – tasks such as “connecting various elements to make up a network.” *Verizon* at 5, 41. This argument is as disingenuous as it is frivolous. ILECs do not have to perform hot cuts when they sign up a new customer.

new entrant because, when there is a “material restrict[ion]” on “the number or geographic scope of the customers [CLECs] can serve,” it can severely impair a CLEC’s ability to provide service. *UNE Remand Order* ¶ 97. The Commission has noted, for example, that serving broader areas can enable CLECs to spread marketing and other overhead costs across a larger number of customers, thereby reducing the disadvantages they face as a result of the ILECs’ superior economies of scale, and that serving broad areas can be particularly necessary in order to be a viable service provider to residential and small business customers. *Id.* ¶ 98. This is a source of impairment even in circumstances when it is feasible for CLECs to enter through alternative facilities broadly, but in which, for obvious reasons, they cannot build simultaneously everywhere.

Thus, the *UNE Remand Order* reasonably concluded that a showing that denial of access will prevent a CLEC from providing ubiquitous service constitutes impairment. In this regard, *USTA* quite plainly approved of this proposition, for it noted the Commission’s determination that lack of ubiquity is a source of impairment, and did not criticize it. 290 F.3d at 422. Instead, the court merely questioned whether ubiquity actually supported national unbundling of the transport element because, for reasons discussed in Part II, *infra*, the Court could not exclude the possibility that alternative transport was in fact available between all wire centers that CLECs needed to access to reach “above-cost” business customers. *Id.*

In fact, the ILECs’ comments do not deny that resulting differences in ubiquity can constitute impairment. They merely note that many CLECs do not seek to provide ubiquitous service, but focus initially on the most profitable segments. *See SBC* at 37-39; *Qwest* at 13-14; *Verizon* at 60-61. But that is not invariably true, and is in any event a *non sequitur*. AT&T and WorldCom, for example, often seek to provide statewide service where the economics and

technical capabilities within a State would support such entry. More fundamentally, the fact that some CLECs enter on a narrower basis than others does not mean that a CLEC who would seek to enter more broadly, but who could not do so without access to UNEs, is not “impaired” in its “ability” to provide “the services it seek[s] to offer.”<sup>20</sup> Indeed, a key purpose of the Act is “to give aspiring competitors every possible incentive to enter local retail telephone markets, short of confiscating the incumbents’ property.” *Verizon*, 122 S. Ct. at 1661. This clearly encompasses rules that enable competition to emerge as ubiquitously as possible. Thus, the premise that CLECs do not need access to UNEs because they can cream-skim is completely antithetical to the Act’s goals.

**Tariffed Services.** The ILECs also again contend that the Commission should overrule its prior holding that the availability of ILEC tariffed access services, and resold services, are not to be considered in the impairment analysis. *See Verizon* 6, 51-55; SBC 27-29, 105. AT&T’s initial comments fully addressed this claim. As AT&T explained (at 38-39), the Commission has properly rejected this argument each time it has been made, on the ground that it would enable the ILECs to render the unbundling obligations meaningless. The ILECs present no new arguments here, and there is no basis for changing this straightforward and plainly proper holding.

**Intermodal Competition.** *USTA* also vacated the *Line Sharing Order* on the ground that the Commission had ordered the unbundling of the high frequency spectrum (“HFS”) of the loop

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<sup>20</sup> *See, e.g.*, GCI at 5-6, 10 (explaining that GCI serves many parts of Alaska using alternative facilities, but UNEs are necessary for it to provide “ubiquitous competitive service”); Moline Dispatch at 6 (“In some cases, access to UNEs from the incumbent is necessary for a competitor to achieve geographic ubiquity.”); NewSouth at 8-9, 21-22 (“UNEP allows NewSouth to expand its customer base and geographic range. Through UNEP, NewSouth can serve customers it could not technologically or economically serve over its own platform.”).

to allow CLECs to provide DSL-based services but had not considered the relevance of competition in broadband services from cable, satellite, and others.<sup>21</sup> The Court held that the Commission should not have refused to consider the existence of substitutes for DSL services that are provided over other media simply because DSL is the only service that CLECs were seeking to offer and DSL can be offered only over telecommunications facilities. *USTA*, 290 F.3d at 228-30. The Court left no doubt, however, that the Commission could, after such a review, readopt its line sharing rules on remand, for the Court expressly rejected the incumbents' alternative claim "that a portion of the spectrum of the loop cannot qualify as a 'network element.'" *Id.*

This aspect of *USTA* thus stands for the proposition that the Commission must consider whether substitute services that are offered outside the ILECs' networks have led to the profitable provision of service by multiple providers that is the object of the Act. The answer is that it does not. That is plainly the case for the voice services. As explained in greater detail below and by Professor Willig, competition provided by cable telephony is extremely limited in scope. Indeed, to date, CLECs in New York have gained about as many customers using UNE-P as all cable companies have obtained nationwide. Willig Dec. ¶ 86.

Further, even if cable telephony competition were to develop, it would permit, at most, a duopoly. As the Commission explained in its *UNE Remand Order* (¶ 55), the language and history of the 1996 Act make it explicit that Congress rejected any notion that voice competition from cable television operators could afford grounds to do away with the Act's unbundling requirements:

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<sup>21</sup> The Commission's line splitting requirements were not a subject of the appeal of the *Line Sharing Order*. Consequently, *USTA* has no bearing on line splitting arrangements in which the CLEC purchases access to an entire loop.

We believe that Congress rejected implicitly the argument that the presence of a single competitor, alone, should be dispositive of whether a competitive LEC would be "impaired" within the meaning of section 251(d)(2). For example, although Congress fully expected cable companies to enter the local exchange market using their own facilities, including self-provisioned loops, Congress still contemplated that incumbent LECs would be required to offer unbundled loops to requesting carriers. A standard that would be satisfied by the existence of a single competitive LEC using a non-incumbent LEC element to serve a specific market, without reference to whether competitive LECs are "impaired" under section 251(d)(2), would be inconsistent with the Act's goal of creating robust competition in telecommunications. In particular, such a standard would not create competition among multiple providers of local service that would drive down prices to competitive levels. Indeed, such a standard would more likely create stagnant duopolies comprised of the incumbent LEC and the first new entrant in a particular market. An absence of multiple providers serving various market would significantly limit the benefits of competition that would otherwise flow to consumers.

As Professor Willig explains (§ 109), CLECs cannot remotely match the cable companies' ability to deploy loop functionality. Like the ILECs, cable companies were able to deploy their near-ubiquitous transmission networks as legally franchised monopolies, and, like local telephone networks, cable networks exhibit huge scale economies and are characterized by substantial sunk costs. Thus, CLECs could no more replicate the cable companies' networks than they can hope to replicate the ILECs'.

This is equally true for broadband services. The Commission need look no further than the price increases that incumbents initiated in response to the contraction of data CLECs last year – and the incumbents' efforts to engage in price signaling and other forms of tacit collusion – to demonstrate that the level of intermodal competition is insufficient to achieve the Act's goals. *See infra* Part III.B. Again, the ILECs' ability to exercise market power arises from the fact that they face only one significant source of intermodal competition, *i.e.*, cable modem

services.<sup>22</sup> Further, cable modem services are not uniformly available and are generally not available to small business customers. *See id.* In fact, analysts estimate that nearly 40% of households have access to DSL but not cable modem service. McKinsey & Company and JP Morgan, *Broadband 2001*, Chart 25 (Apr. 2, 2001).

Vigorous intramodal broadband competition is particularly necessary because the ILECs have strong incentives to charge high prices for DSL. *See infra* Part III.B. That is because DSL-based services cannibalize high margin second line and T1 services. *See id.* Thus, by keeping DSL prices high, ILECs not only earn profits on DSL that are comparable to what they earn on existing high margin services, but they know that many of the customers that they “lose” because of the high DSL prices will end up returning to or staying with other high margin services. Intramodal competition from CLECs provides customers with an alternative to the ILECs’ DSL offerings that would constrain the ILECs’ exercise of market power.

**II. THE COMMISSION CAN AND SHOULD DECLARE ANY EXISTING SUBSIDIES TO BE IRRELEVANT TO ITS UNE DETERMINATIONS, BUT IN ALL EVENTS THE RECORD DIRECTLY PROVES CLECS SUFFER IMPAIRMENTS FOR BOTH “ABOVE-COST” AND “BELOW-COST” CUSTOMERS AND ADDRESSES ALL “MARKET SPECIFIC VARIATIONS IN COMPETITIVE IMPAIRMENT.”**

In addition to holding that the *UNE Remand Order* applied an overbroad standard of “impairment,” *USTA* held that the *UNE Remand Order* insufficiently explained its adoption of national unbundling rules that applied to all “customer classes and geographic areas.” Although the *UNE Remand Order* had addressed (§ 20) whether there should be exceptions to the national list of elements for “discrete geographic and product markets,” *USTA* was concerned that the

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<sup>22</sup> As explained in Part III below, although initially promising, fixed wireless and satellite-based data services have to date failed to live up to expectation and have achieved only minimal consumer acceptance.

Commission had failed to consider “market specific variations in competitive impairment” and that by instead lumping all customers together into a single market, it had ordered unbundling “in many markets where there is no reasonable basis for thinking that competition is suffering from any impairment of the sort that might have been the object of Congress’s concern.” *USTA*, 290 F.3d at 422. As explained in Part I and in subsequent sections of these reply comments, AT&T’s impairment showings fully reflect the “variations in competitive impairment” that apply to different classes of customers due to the cost characteristics of the relevant UNEs, and they establish that where impairments now exist, the conditions apply to all geographic areas.

Ironically, *USTA* principally faulted the *UNE Remand Order* for failing to explain why its unbundling determinations focused solely on cost and cost-related disparities and did not consider the effects of the historic system of funding universal service, which allowed incumbents to charge “above cost” rates to certain customers in order to “cross-subsidize” the underpriced basic service that incumbents have been required to provide to certain “rural and/or residential customers.” As *USTA* noted, this system distorts competition for both classes of customers, and *USTA* concluded that the Commission had not explained why it had not taken these effects into account in its unbundling determinations. *See id.* at 422-23.

First, the Court noted that, quite apart from incumbents’ costs advantages in deploying UNEs, the competitive provision of basic service to “rural and/or residential customers” can be independently precluded by State requirements that incumbents provide the service at below-cost rates in some conditions. *Id.* at 422. In other circumstances, the Court said that any resulting UNE-based competition would develop only if (1) UNE rates were “well below the ILECs’ historic costs” or (2) CLECs can offset below-cost basic service rates with revenues from long distance or enhanced services. *Id.* The court said “the Commission never explicitly addresses by

what criteria want of unbundling can be said to impair competition in such markets where, given the ILECs' regulatory [restrictions], any competition will be wholly artificial." *Id.*

Second, the Court stated that the "gap[s] in the Commission's reasoning [were even] greater in the case of "above-cost customers." *Id.* The Court said that even if there had been findings of impairment specific to these customers, the findings appeared skewed, because the Commission "nowhere appears to have considered the advantage CLECs enjoy in being free of any duty to provide underpriced service to rural and/or residential customers and thus of any need to make up the difference elsewhere." *Id.* at 423. In the Court's view, this could give CLECs a *price* advantage in providing service to above-cost customers that "offset[s]" the *cost* disadvantages that CLECs have in deploying alternative facilities, and that the question for the Commission seemingly should be whether there is a "net impairment." *Id.* The Court noted that "as a matter of pure language," the Commissioner could "perhaps" treat the CLECs' cost disadvantages in deploying and using alternative facilities to constitute "an impairment" and ignore any advantage that CLECs enjoy under the historic system of subsidiaries. *Id.* at 423. However, the Court stated that "the Commission has never explained why such a view makes sense." *Id.*

There is a single short answer to the Court's concerns about below-cost and above-cost customers. Section 254 of the Act requires that any implicit subsidies that have been built into retail rates be *eliminated* and that such subsidies be replaced with a "competitively neutral" method of funding universal service that is explicit and portable – so that universal service support mechanisms have no effect on competition for *either* below-cost *or* above-cost customers. Indeed, because of section 254's separate mechanisms, the Supreme Court has already held that historic methods of funding universal service are irrelevant to unbundling

determinations under the Act. *See IUB*, 525 U.S. at 392-93.

However, even if the Commission were to attempt to reflect any existing subsidies in its unbundling analysis, they have no effect on its impairment determinations. AT&T's evidence of actual marketplace experience focuses on its and other CLECs' ability to serve "above-cost" customers at prevailing retail rates that reflect any existing subsidies. It demonstrated that, despite any resulting advantages, CLECs have been unable profitably to serve "above-cost" large business locations through alternative loops or transport facilities, or to provide service to customer locations served with voice-grade loops using their own switches, each of which demonstrates a "net impairment." *USTA*, 290 F.3d at 423. This marketplace experience, as well as the Commission's findings in section 271 cases and other orders, demonstrate that CLECs are, *a fortiori*, impaired in offering service even when basic service rates are priced below cost.

**A. Section 254 And The Supreme Court's *IUB* Decision Make The Existence of Implicit Subsidies Irrelevant To The Commission's Unbundling Determinations.**

The subsidy-related deficiencies that *USTA* identified in the *UNE Remand Order* were, on their own terms, failures of explanation only. The Court held that the Commission had not explained why impairment determinations had not weighed the effects of subsidies that, as a historic matter, could preclude the competitive provision of local service to certain rural and/or residential customers who received "underpriced" service and could give CLECs seeming arbitrage advantages in serving the other customers who had been charged above-cost rates to fund the implicit subsidies.

But providing this explanation is an exceedingly simple matter. A fundamental object of the Act is to eliminate implicit subsidies and their potential to distort the competitive provision

of local service in the ways *USTA* identified.<sup>23</sup> As the Supreme Court held in *AT&T v. Iowa Utils. Bd.*, *supra*, the Act's terms and structure permit, and indeed require, the Commission to make unbundling determinations based solely on cost-related disparities and without regard to any residual implicit subsidies.

This is clear from section 254 and its relation to section 251. Section 254 requires the Commission and the States to remove implicit subsidies from interstate and intrastate retail and other rates, to fund universal service support explicitly (*e.g.*, through surcharges on customer bills), and to make the subsidies portable and "competitively neutral" – such that subsidy payments are received by whichever carrier serves the rural and/or residential customers who are to be subsidized. Once this regime is fully implemented everywhere, universal support will have no distorting effects on competition anywhere. There will be no customers that carriers must serve at losses, for carriers that serve those "rural and/or residential" customers who receive "underpriced" service will also receive explicit, portable subsidies that make up for any shortfall. And because the funding of subsidies will be explicit and will be paid by other customers regardless of the carriers that they use, CLECs will have no arbitrage or other advantage in serving those customers.

Critically, under the Act's terms, this process of universal service reform begins only *after* the Act's unbundling requirements are first implemented. In particular, section 251(d)(1) (and the timetables established by section 252) required the implementation of the Act's unbundling provisions by rules issued within six months of the enactment of the 1996 Act and by interconnection agreements arbitrated within ten months. By contrast, section 254 did not

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<sup>23</sup> See *Verizon*, 122 S. Ct. at 1654 (a purpose of the Act is to "revis[e] the mandate to provide universal service"); *Local Competition Order* ¶ 7 ("The second part of the [competition] trilogy is universal service reform.").

require the Commission even to establish a “schedule” to implement its provisions until 15 months after the passage of the 1996 Act, and it imposed no timetable at all on the States. As the Eighth Circuit (*CompTel v. FCC*, 117 F.3d 1068 (8th Cir. 1997)) and the Fifth Circuit (*Texas Office of Public Utility Counsel v. FCC*, 183 F.3d 393 (5th Cir 1999)) have confirmed, the Act provides that universal service reform is to occur *after* unbundling rules are developed and implemented – in recognition of the fact that the competition that unbundling unleashes will not occur instantaneously and will not have immediate significant adverse consequences for incumbents, but will nevertheless begin to drive rates to costs and make subsidies unsustainable.

The Supreme Court thus has held that the ILECs’ claims that all implicit subsidies have not been eliminated is simply irrelevant to the Commission’s network element unbundling determinations under sections 251(c)(3) and (d)(2). In particular, the ILECs challenged the Commission’s original unbundling rules because they allowed CLECs to obtain all elements of an incumbent’s network in combined form and because, the incumbents claimed, that would give CLECs unfair “arbitrage” advantages in serving the customers that fund subsidies. The Supreme Court rejected their claims on the grounds that, because “§ 254 requires that universal service subsidies be phased out,” any advantages are “temporary” and that the Commission properly treated the existence of implicit subsidies as irrelevant to its unbundling determinations. *IUB*, 525 U.S. at 392-93.

In this regard, even apart from section 254 and the Act’s structure, it would have matters exactly backwards – and would be entirely antithetical to sound economics and the Act’s object of fostering competition – if the Commission were to take into account existing levels of retail prices and the extent of any implicit subsidies in making unbundling determinations. The whole point of the competition that unbundling unleashes is to make retail (and exchange access) prices

more efficient by driving them closer to cost. Unbundling allows CLECs to undercut the above-cost prices that ILECs charge and to put pressure on any below-cost rates that are charged any rural or residential customers, ultimately making those implicit subsidies unsustainable. Thus, economically rational impairment determinations cannot rest on a static analysis of CLECs' ability to serve customers through self-provisioned facilities at existing retail prices, but must acknowledge that unbundling unleashes dynamic competition that will drive prices closer to economic cost. *See* Willig Reply Dec. ¶¶ 25, 60. Thus, while the *UNE Remand Order* did not expressly address the irrelevance of subsidies to unbundling determinations, it properly concluded that it will consider only cost differences in designating UNEs, and not the opportunities to profit under existing retail prices. *UNE Remand Order* ¶ 73 (“[P]rofit margins for both new and existing carriers will depend on the degree of competition that exists in the market.”).

For these reasons, there is no substance to the incumbents' claim that the Commission should take into account the fact that some States may not have yet implemented section 254 and developed an explicit fund to support legitimate universal service obligations. The Act's terms and structure establish that the implementations of the federal unbundling requirements cannot be held hostage to the actions or in-actions of individual States. The Act contemplates that unbundling determinations are to be made without regard to existing levels of subsidies and that UNE-based competition will put pressure on ILECs, who are in the best position to do so, to have State commissions fulfill their section 254 obligation to adopt explicit universal service funding mechanisms. Once implemented, such mechanisms fully eliminate the “disadvantage” claimed by the ILECs – *i.e.*, the need “to make up the difference elsewhere” when providing “underpriced service to rural and/or residential customers.” *USTA*, 290 F.3d at 423.

In this regard, full implementation of section 254 will not only eliminate CLEC's putative advantages in serving customers who are currently charged above-cost rates, but it will also mean that there is no regulatory-created impediment whatever to CLECs serving the residential customers who are charged subsidized rates. Section 254 requires that existing implicit subsidies must be made both explicit and portable – such that the identity of the carrier is irrelevant in determining who gets the subsidy and that CLECs will receive the entire amount of the subsidy when they win a rural or other customer in a class that is entitled to receive below-cost basic service rates. Thus, UNEs should be made available to CLECs to serve areas with even well below cost rates. To the extent the CLEC can provide superior service to the ILECs (whether with better quality or lower cost), portable universal service support will allow them to displace the ILEC.

**B. In All Events, The Record Evidence Establishes That Denial Of Access To UNEs Impairs Service To Above-Cost Customers At Current Retail Rates That *Include* Any Implicit Subsidies.**

Any attempt to determine the extent to which CLECs in fact receive “advantages” because of the existence of residual implicit universal service subsidies would be exceedingly complex and beyond any realistic capacity of the Commission in this proceeding. First, it would require assessing whether and to what extent ILECs are in fact providing service to any class of customers at a loss in each state – taking into account the total stream of revenues that incumbents earn as a result of being local service providers. This determination would have to be made for each ILEC with whom the CLEC seeks to compete, for the extent to which an individual ILEC in fact provide subsidized service varies greatly from ILEC to ILEC.<sup>24</sup> Second,

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<sup>24</sup> For example, most customers who receive subsidies are served by rural LECs who, because of the Act's exemptions, are not currently subject to the Act's unbundling requirements.

it would also require a determination of whether and to what extent CLECs have voluntarily offered service to all customers served by particular ILECs and have therefore eliminated the advantage that they nominally would enjoy if they served only customers for whom above-cost rates have historically been justified to fund implicit subsidies. For example, AT&T offers local service in New York to all the customers that Verizon serves in that State, and AT&T's "take rate" is about the same in all areas of the state; thus, there would appear to be no conceivable basis for assertions that AT&T has "advantages" in serving any class of customers. *See Willig Reply Dec.* ¶ 57.

However, the Commission can resolve the instant proceeding and can adopt AT&T's proposals here without resolving any issues about the role of implicit subsidies in unbundling determinations or addressing any of the foregoing imponderables. The Court's fundamental concern in *USTA* was that the Commission's failure to consider the effects of implicit subsidies could have resulted in broader unbundling than was warranted, particularly in regard to facilities used to serve the "above-cost" customers. The Court noted in particular that the *UNE Remand Order* indicated that some alternative transport facilities had been "significantly deployed on a competitive basis." *USTA*, 290 F.3d at 422. The Court appeared concerned that there might not be cognizable CLEC "impairment" in the provision of transport in the above-cost "markets" because dedicated transport was in fact available to provide connections to all the wire centers that serve business and residential customers that are served at above-cost rates. Thus, the Court was concerned that the Commission may have treated above-cost and below cost customers as comprising a single market and ordered "national" unbundling on the basis that transport had not been competitively deployed to connect the wire centers that serve those customers who receive subsidized basic service. The Court also expressed concern that, even if impairment findings had

been specific to the "above-cost" market, it had been based on the fact that CLECs have higher costs than the ILECs in deploying and using network facilities but the Commission had ignored the offsetting "advantages" CLECs might receive because they do not have a duty to provide "underpriced" service to some customers.

The direct and complete answer to this concern is that the impairments AT&T and other CLECs have shown here apply to serving customers in the so-called "above-cost" markets at retail and other rates that *include* any implicit subsidies that have yet to be removed under section 254. This completely resolves any concern that there might be "little or no real net impairment" in those markets and that unbundling might be ordered simply because "below-cost markets" do not show comparable levels of deployment of competitive facilities. *USTA*, 290 F.3d at 423-24.

For example, AT&T's showing of impairment with respect to high-capacity loops is based on its experience in attempting to serve the large business customers who use these loops, and this actual marketplace experience obviously relates to its ability to provide service at prevailing retail rates that include any implicit subsidies that may remain. Similarly, its showings of impairment in the absence of unbundled dedicated transport or switching are based on CLECs' experience attempting to serve business customers through alternatives to incumbents' elements. Dedicated transport is used to connect wire centers where CLECs have collocated facilities (or wire centers where loop-transport combinations are available), to locations where CLECs have deployed switches, and self-provisioned switches have been used exclusively to serve business customers.<sup>25</sup> The actual market experience relating to these

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<sup>25</sup> Low volume locations that are served using UNE-P do not rely on dedicated transport. Rather, they use shared transport. CLECs' impairment in the absence of shared transport has been well documented and is summarized in Part X below.

elements is therefore also based on efforts to compete at prevailing retail rates that include any remaining implicit subsidies.

In short, the evidence of impairment for loops, transports, and switching establishes that CLECs will suffer from what *USTA* terms “net impairments” if they are denied access to these elements. The cost and other disadvantages CLECs face in deploying or using alternative facilities to provide service are not remotely “offset” by any advantages that they enjoy because existing retail rates may contain implicit subsidies and CLECs are not obligated to provide “underpriced” basic service to “rural and/or residential customers” *Compare* 290 F.3d at 422-23.

**C. The Same Evidence Establishes Impairment In Serving “Below-Cost” Customers.**

Finally, because the evidence demonstrates CLECs have been impaired in profitably serving “above-cost” customers at prevailing retail rates, it follows, *a fortiori*, that CLECs are also impaired if they cannot access ILEC loops, switching and transport to serve “below-cost” rural or residential customers.

It may well be that there are classes of customers in areas of the country where total revenues from basic and complementary services do not cover the cost of serving them and where explicit, portable subsidies are not available because State commissions have not yet implemented section 254. But that does not alter the fact that lack of access to UNEs “impairs” CLECs’ ability to serve these customers. Even if State-prescribed below-cost retail rates (and the absence of portable subsidies that make up the difference) now preclude CLECs from serving these customers, the absence of UNE would further “diminish” their ability to do so – which is all that is required to find impairment now. And because access to UNEs is necessary to allow competition for these customers when portable subsidies are implemented in the future, there is no question that denial of UNEs will impair CLECs’ ability to serve these customers. At that

time, there will be no customer that any carrier – ILEC or CLEC – must serve “below cost,” for the difference between the subsidized rates and the carrier’s costs will be made up by an explicit subsidy payment that is competitively neutral, and access to UNEs will be essential for competition to develop.

Further, when CLECs in fact use UNEs to serve customers in areas where subsidies are not yet explicit and portable, there is no question but that “want of unbundling” would impair the very competition the Act seeks to create. Thus, the existing record makes it easy for the Commission to provide the explanation that *USTA* found lacking in the case of “below-cost markets.” In particular, the Commission can readily explain “by what criteria want of bundling can be said to impair competition” in markets where basic service is provided at rates that do not cover their costs (when “conventionally allocated”) and where the Court indicated that CLECs will enter only (1) because UNEs are priced below the ILECs’ historic costs or (2) the CLECs can provide “complementary services” such as long distance or vertical services at prices high enough to offset the shortfall in the basic service rates. *Compare USTA*, 290 F.3d at 424. Indeed, the Commission’s prior determinations require these conclusions in both cases.

First, the Commission can readily explain that competition that results because UNEs are priced below the incumbent’s historic costs is exactly the kind of competition that the Act sought to foster and that impairment exists if the lack of unbundling prevents *or impedes* such competition. As the Commission has previously determined (*Local Competition Order* ¶¶ 675, 679) – and as the Supreme Court has now affirmed (*Verizon v. FCC*, *supra*) – TELRIC represents the economic costs that the incumbents incur when they use their elements expressly to provide their services and is the appropriate price for the leasing of network elements.

Second, it is equally clear that CLECs are impaired if the lack of unbundling prevents

them from entering markets profitably by providing both basic *and* “complementary services” to subsidized customers. In this regard, the Commission has previously recognized that it is utterly fallacious to suppose – as did former Chairman Hundt seemingly did in the language quoted in *USTA* (290 F.3d at 423) – that ILECs are undercharging subscribers merely because they provide basic local exchange services below cost. Although State commissions have sometimes required that basic retail exchange rates be set at levels that would not cover the fully distributed costs allocated to this service, they did so while *simultaneously* allowing ILECs to charge *above* cost (or unregulated) rates for vertical features, exchange access services, intraLATA toll services, yellow pages, and other complementary services that the ILECs offer by virtue of the fact that they are the dominant local service provider. As a matter of economics, it is the *total* of the revenues that can be earned from both basic *and* complementary services that govern entry decisions. *See* Willig Reply Dec. ¶ 54.

The Commission has previously recognized this fact, and rejected claims that CLECs can or should fail to enter markets merely because basic service revenues alone do not cover all the costs of providing service. Indeed, it has specifically concluded that “competing providers may be able to provide basic service, at less than the cost of facilities and associated management, just as ILECs do currently, by selling customers higher profit vertical or intrastate toll services, or through receipt of access revenues and subsidies.” *Local Competition Order* ¶ 849. Similarly, the Commission has held that determinations whether CLECs can profitably serve residential customers in individual markets must reflect all the incremental revenues from complementary services that they can earn as a result of becoming a local service provider. *See Rhode Island 271 Order* ¶ 107; *Vermont 271 Order* ¶¶ 68-73.

In these regards, the Commission does not have the data to determine whether there are a

significant numbers of areas in which revenues from the provision of residential local exchange service do not cover the pertinent TELRIC costs, and the ILECs have never provided such data. However, the scope of such areas is likely to be far narrower than the Court of Appeals and former Chairman Hundt apparently supposed. When all sources of revenue are considered, and the costs of providing service are properly calculated, indications are that residential customers generally provide revenues that cover all the costs of serving them and that implicit subsidies are primarily or exclusively provided to rural customers. *See* Willig Reply Dec. ¶¶ 55-56. Indeed, the ILECs themselves have acknowledged that overall revenues generated from serving residential customers cover the costs of this service. *Id.*

In sum, the simple response to *USTA*'s request for an explanation regarding the effects of implicit subsidies on unbundling decisions is that, in view of section 254 and the Supreme Court's holding in *AT&T v. Iowa Utils. Bd.*, they are simply irrelevant to such determinations. However, the record before the Commission also shows that any subsidies that are not yet removed have had no effect on the key facts that establish CLECs are impaired in offering service to all relevant classes of customers if they are denied access to unbundled loops, transport, and switching.

**III. THE COMMISSION SHOULD REJECT THE ILECS' REQUEST TO EXCEPT "BROADBAND" AND "NEW" FACILITIES FROM THE ACT'S CORE UNBUNDLING OBLIGATIONS.**

**A. The Commission Should Reject The ILECs' Arguments That Unbundling Rules Impede Their Incentives To Deploy NGDLC Loops And Should Consider Important Issues Regarding Deployment Of FTTH In A Separate Proceeding.**

As described in greater detail below, the ILECs' argue that the Act's unbundling obligations impede them from deploying broadband-capable loops. At the outset, however, it must be recognized that two different technologies are at issue. First, there is the next generation digital loop carrier ("NGDLC") technology that is actually being deployed by the ILECs today. Second, there is the passive fiber optic technology that is being studied as a way of providing fiber-to-the-home (or FTTH). Because of fundamental differences between the two technologies, particularly differences in the maturity of each technology, the appropriate resolution of the ILECs' argument should be different depending upon which technology is at issue.

NGDLC is a well-established technology that has been widely deployed by the ILECs. As a result, the factual record regarding whether unbundling rules impede ILECs' incentives to invest in NGDLC loops is fully developed and the ILECs' investment incentive claims are ripe for a decision by the Commission. As described below, the evidence clearly establishes that the ILECs have widely deployed – and are continuing to deploy – NGDLC despite their claims that existing unbundling rules sap their incentives to do so. And the evidence further demonstrates that CLECs would be significantly impaired without access to such loops, while at the same time it would not be difficult or expensive for the ILECs to permit CLECs to access both the high frequency and low frequency signals carried on NGDLC loops at central offices.

On the other hand, the record regarding the deployment of all-fiber loops to residential homes is not mature. This is because deployment of FTTH is still in its infancy and numerous technological and economic issues remain to be resolved. Nonetheless, a number of parties, including the ILECs and their suppliers, argue that the Commission must eliminate section 251(c)(3) unbundling obligations in order to promote deployment of FTTH. AT&T responds to those arguments below and demonstrates that: (1) the FTTH proposals on the existing record are incremental to the ILECs' existing networks; (2) the current judgment of the investment community is that FTTH is too expensive to implement (and no one has plans to do so) in the near term; and (3) there are other significant issues (both practical and cost-related) that must be resolved before FTTH could be broadly implemented. On the other hand, there is no reason to believe that proper application of TELRIC would not lead to an appropriate compensation to ILECs for this functionality based on their actual efficient costs. Indeed, in a truly competitive world, ILECs would welcome wholesale purchasers on their FTTH plant because it reduces their risks. Finally, CLEC access to FTTH would not be particularly difficult or expensive.

That said, it should be recognized that FTTH has the potential to bring a host of benefits to consumers, content providers, manufacturers and the general economy. But because FTTH is still in its infancy and raises a number of new and unique issues, it should be dealt with in a separate proceeding in which the Commission takes a comprehensive look at the subject in order to determine the best way to ensure deployment of this technology while not undermining the Act's goal of opening local markets to competition. This bifurcated approach is particularly appropriate because the current review of UNEs must resolve the issues relating to the ILECs' *current* network architectures that they are actually implementing and that CLECs must be able to access in order to have a realistic opportunity to be long-term competitors. Certainly, it makes